

P1

P2

(2) Use *drawDE.m* to use subdivision methods that yields a polygonal line which approximates *Bezier curve*.

For example if we input $n = 5$, $t = \frac{1}{2}$ and a series points through screen:

```
n = 5; % iterate times
t = 1/2; % t
[x,y] = ginput(); %screen input the data
d = [x,y]; % d(i,:) i = 1,2,... represents a point
d = sortrows(d); % sort our data
b = calculateDE(d, n, t);
% calculate the points used to draw the curve
b = sortrows(b); % sort our data
plot(d(:,1), d(:,2), 'r*'); % draw the input data d
hold on;
plot(b(:,1), b(:,2), 'b-') % draw our curve
title('Bezier_Curve')
```

Then we can get the graph:

